

**Protocol
for
Incidental Take Authorization**

Net-Veined Leafhopper (*Polyamia dilata*)

Note

If carrying out a given protocol is not feasible, or multiple listed species in a given management area pose conflicts, contact the Bureau of Endangered Resources at 608/264-6057. Staff in BER will work with Integrated Science Services (Research) staff, species experts and managers to establish an acceptable protocol for a given site that will allow for incidental take without further legal Consultation or public notice

I. Species Background Information

A. Status

State Status: Threatened.

USFWS Region 3 Species of Management Concern: No

Number of Known Sites in Wisconsin: 11 sites total in the counties of LaFayette, Dane, Iowa, Sauk, Crawford, Jackson, and Pierce.

Global Range: Driftless areas of WI, MN, IA, and IL; loess hills of IA; and sand prairies of northwest IN.

B. Habitat

Host plant: Unknown for certain. Most likely it is one or several native cool-season *Panicum* grasses of the subgenus *Dicanthelium*. The species complex of *P. lanuginosum*, *P. villosissimum*, and *P. praecocius* is the leading candidate at this time.

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General Habitat Description: Seems to be restricted to areas of upland dry to dry-mesic bluff (hill) prairie or dry to dry-mesic sand prairie (barrens).

C. Life History

Number of generations per year: Unknown (likely just one ?).

Over-wintering stage: Unknown (likely as egg).

Over-wintering location: Unknown (likely in the litter, duff, or soil surface). Based on life history of other leafhoppers, the eggs may very well be inserted into the stems of the host plant near or at their base, and thus spend the winter there.

Adults active: At least late July through August.

Single season dispersal ability: Unknown (likely to be 1,000s of feet; adults are winged).

Immatures active: Unknown.

II. Management Protocol For Authorized Incidental Take

If the management activity is for the purpose of recovering, maintaining, or improving the grassland, prairie, or savanna ecosystem that includes habitat for net-veined leafhoppers, then incidental take is allowed if these conditions are followed:

A. Burning

1. If no monitoring of net-veined leafhopper is occurring, and

- a. If burning in early spring (*see definition*),

Then you may burn up to 1/3 of the site's total area of dry prairie in any given spring, **as long as**, at least 1/2 of the dry prairie habitat remains unburned for at least two consecutive springs.

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- b. If burning at other times of the year,

Then you may burn up to 1/4 of the site's total area of dry prairie in any given 12 month period, **as long as**, at least 2/3 of the dry prairie habitat remains unburned for at least two consecutive growing seasons.

2. If monitoring of net-veined leafhopper is occurring¹,

Then other burn regimes may be employed under consultation with the DNR Bureaus of Endangered Resources and Integrated Science Services.

¹ *At least 2 years of baseline monitoring must occur before burning begins, and the monitoring must follow protocol acceptable to the DNR Bureaus of Endangered Resources and Integrated Science Services.*

B. Mowing/Haying

1. If no monitoring of net-veined leafhopper is occurring, and

- a. If mowing/haying once between May 11th and Sept. 30th, and

- 1) If allowing at least 2 years before re-cutting more than 1/2 of the previously cut portion of the site's dry prairie habitat,

- Then you may cut up to 3/4 of the site's total dry prairie habitat at a minimum cut height of 6" above the ground.

- 2) If allowing at least 3 years before re-cutting more than 1/2 of the previously cut portion of the site's dry prairie habitat,

- Then you may cut up to 7/8 of the site's total dry prairie habitat at a minimum cut height of 6" above the ground.

- b. If mowing/haying between Oct. 1st and May 10th,

- Then there are no restraints on the activity.

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2. If monitoring of net-veined leafhopper is occurring¹,

Then other cutting regimes may be employed under consultation with the DNR Bureaus of Endangered Resources and Integrated Science Services.

¹ At least 2 years of baseline monitoring must occur before cutting/mowing begins, and the monitoring must follow protocol acceptable to the DNR Bureaus of Endangered Resources and Integrated Science Services.

C. Selective Tree/Brush Cutting

As long as heavy equipment is not used and the host plants are not buried under cut materials, there are no restraints on this activity.

D. Grazing

Allowed only under consultation with the DNR Bureaus of Endangered Resources and Integrated Science Services.

E. Use of Herbicide

As long as native prairie grasses are not being affected, there are no restraints on the use of herbicide.

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Presence/Absence Survey Protocol

Personnel conducting the surveys must be adequately trained in the use of sampling techniques and leafhopper genus *Polyamia* identification. The training must include field experience.

Sampling period: July 23 to Aug. 25.

Weather conditions: Air temp: 75 to 90 F
 Wind speed: depends on sampling method used (see below)
 Sky: clear to partly cloudy
 Foliage must be dry.

Time of day: 10 am to sunset.

Number of visits per site: Make a minimum of 3 visits in a season, with not less than 4 days between visits.

Sampling effort per site visit: Sample a minimum of 10 patches of native cool-season *Panicum* grasses, for every 20 acres of dry to dry-mesic prairie habitat.

Sampling method:

Sweep netting: Wind speed must be below 6 mph. Use 15 to 18 inch diameter sweep nets with 3 to 5 foot long handles. Leafhoppers are sensitive to vibrations and movement, and quickly drop down into the duff when disturbed. Therefore, the target plants must be approached quickly, but quietly. Make just one fast sweep tight across the plant's surface as you quickly step (lung) towards the plants with the net well out in front of you. If you are in a large patch of *Panicum* grass, additional sweeps may be made with each long forward step through the patch. Approach target plants with the sun in front of you (i.e., your shadow behind you). Technique is important.

or

Vacuum sampling (modified leaf blower): Wind speed may vary from 0 to 20 mph. Vacuum the surface and down into the duff of *Panicum* grasses. Under ideal weather conditions, the vacuum method is only slightly more effective than the sweep net at finding red-tailed leafhoppers. However, under windy conditions (even just an occasional gust above 7 mph) and during temperatures either above or below 75 to 90 F, the vacuum is much more effective than the sweep net. Leafhoppers tend to retreat down into the duff when conditions are too cool, too desiccating (hot and sunny), or too windy.

Because field identification of this species is next to impossible, all specimens of the genus *Polyamia* must be collected for latter in lab identification. Keeping specimens fresh (either alive or gassed in a killing jar) and then placed in a freezer within 24 hours is the preferred method of collection, but the specimens may also be placed in 70% solution of isopropyl alcohol.

Definitions

Site: Any contiguous patch of prairie vegetation or clusters of patches of prairie vegetation not separated from one another by more than 300 ft. of open (non-brush/tree) cover or by more than 20 ft. of dense brush/tree cover. (Note: roads and trails do not constitute barriers to dispersal.) If the area straddles a property line, the different ownerships must be considered different sites, unless net-veined leafhopper survey/management agreements exist between the owners.

Early Spring: Any time prior to the 7th day after the first opening of pasque flowers (*Anemone patens*) on the site. If no pasque flowers are on site, the closest population with a slope aspect similar to the site in question may be used.